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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,177	02/22/2005	Kari Antila	122488	3559
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OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER HAGEMAN, MARK	
			ART UNIT 3653	PAPER NUMBER
			MAIL DATE 09/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/522,177

Applicant(s)

ANTILA ET AL.

Examiner

Mark Hageman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 14 is/are rejected.
- 7) ☒ Claim(s) 11-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12-12-2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3-13-2007, 2-22-2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 11-13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependant claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The claims are narrative in form and do not clearly set forth the elements being claimed. Relative to process claims 1-13 it is not possible to determine what the active method steps. An amendment clearly setting forth the active steps would overcome this rejection. For example in claim 1 rather than "the amount of material on the screen surface is determined by automatic measurement," could read "determining the amount of material on the screen surface by automatic measurement," which would clearly set forth a step of "determining..." This is only one example, as other similar instances also exist. In addition to the issue discussed above the following claims are indefinite for the

following reasons also. Also in claim 14 it is unclear which elements are claimed, especially the language following "characterized in that..."

5. Claims 3 and 6 recite the limitation "the processing units" in lines 3 and 1 respectively. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 9 states, "the load caused by the material is determined by the load of the engine caused by the material." This is unclear and renders the claim indefinite. Furthermore what is "the engine" as this term lacks antecedent basis.

7. Claim 10 recites the limitation "the hydraulic system" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 1-9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,248,042 to Kuhmonen. Kuhmonen discloses a method for controlling a screening machine comprising at least one screen surface (20), feeding means (18) that feed material to be screened towards the screen surface and onto the screen surface where the material is separated into a first fraction remaining on the screen surface and into a second fraction passed through the screen surface while the material is moving along the screen surface (c3 lines 25+), characterized in that the amount of material on the

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screen surface (6a) is determined by automatic measurement, and the feeding speed of the feeding means (5) is controlled on the basis of the measurement by automatic control (C) in such a manner that the feeding speed is changed to a different feeding speed in one of the following ways: - upper and lower preset values (val_{max} , val_{min}) for the measurement value (val_m) of a variable dependent on the amount of material on the screen surface are used and when the measurement value (val_m) passes one of the preset values, the speed of the feeding means is lowered, and when the measurement value passes the other preset value, the speed of the feeding means is increased (c3lines 57+), or - when the speed of change of the measurement value (val_m) of the variable exceeds a preset value ($(\Delta Val_m / \Delta t)_{max}$), the speed of the feeding means is changed.

-Re claim 2 the amount of material on the screen surface is determined by measuring a variable of the movement of the screen surface or a variable of the drive means of the screen surface causing the movement of the screen surface (c3 lines 57+).

-Re claim 3 the amount of material on the screen surface is determined by measuring the load caused by the material on any of the processing units of the screening machine or on any machine following the screening machine and extending

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the process of the screening machine and being connected to the control system of the screening machine (c3 lines 57+).

-Re claim 4 the load caused by the material on the screen is measured by measuring a variable of the screen drive means causing the transport or processing of the material on the screen surface (c3 lines 57+).

-Re claim 5 the variable is a drive pressure, drive current or drive running speed (c3 lines 57+ ad c5 lines 54+).

-Re claim 6 the processing unit is any of the following: discharge conveyor, shredder, crusher (c3 lines 44+).

-Re claim 7 the load is determined by measuring any of the following variables: drive pressure of the discharge conveyor, shredder or crusher, drive current of the discharge conveyor, shredder or crusher, running speed of the discharge conveyor, shredder or crusher (c3 lines 57+). Examiner contends that the rotation of the drum causes the drum to act as a discharge conveyor in addition to a screen.

-Re claim 8 the machine following the screening machine and extending the process of the screening machine and being connected to the screening machine's control system is any of the following: - second screening machine - crushing machine - conveying machine (26).

-Re claim 9 the load caused by the material is determined by the load of the engine caused by the material (c3 lines 57+)

-Re claim 14 a screening machine comprising at least one screening surface (20), feeding means (18) arranged to feed material to be screened towards the screen surface and onto the screen surface, the screen surface being capable of separating the material into a first fraction remaining on the screen surface and into a second fraction passed through the screen surface while the material is moving along the screen surface (c3 lines 25+), the screening machine further comprising sensors measuring the state of the screening process, characterized in that a sensor (c3 lines 57+) is arranged to measure a variable dependent on the amount of material on the screen surface; a controller (46) to which said sensor is connected through a data transmission line to receive a measurement value related to said variable from the sensor; an actuator operatively connected to the feeding means and arranged to change the feeding speed of the feeding means (c3 lines 57+); whereby said controller is connected to said actuator through a data transmission line and arranged to give a

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control command to said actuator in response to the measurement value (valm) received from the sensor (S) to change the feeding speed of the feeding means to a different feeding speed in one of the following ways: an upper preset value (valmax) and a lower preset value (valmin) for the measurement value are programmable and changeable in the controller (C) and the controller is arranged to give a speed reducing control command to the feeding means when the measurement value (valm) passes one of the preset values (valmax, valmin), and a speed increasing control command when the measurement value passes the other preset value (c3 lines 57+), or a preset value $((\Delta \text{Valm}/\Delta t)_{\text{max}})$ for the speed of change of the measurement value (valm) is programmable and changeable in the controller (C) and the controller is arranged to give a speed changing control command to the feeding means when the speed of change exceeds the preset value $((\Delta \text{Valm}/\Delta t)_{\text{max}})$.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhmonen in view of US 4,665,772 to Greene. Kuhmonen discloses all the limitations of claim except the load caused by the material is determined by the temperature of the hydraulic fluid of the hydraulic system. Greene discloses the use of hydraulic fluid

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temperature as a control input (c8 lines 40+) for facilitating shift performance and minimizing other adjustments (c8 lines 49+) and minimizing shift shock or jerk.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Kuhmonen to include the determination of load by measuring hydraulic fluid temperature, as taught by Greene, for the predictable result of improved performance and decreased wear.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Hageman whose telephone number is (571) 272-3027. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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